What is claimed is:

1.   An isolated gene set having less than about 400 sequences comprising from about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20.

5   2.   A kit comprising probes greater than about 30 nucleotides in length that specifically bind to from about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20.

3.   The kit of claim 2, wherein the probes are selected from the group consisting of SEQ ID NOS: 21-40.

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4.   A gene chip comprising probes greater than about 30 nucleotides in length that specifically bind to about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20.

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5.   The gene chip of claim 4, wherein the probes are selected from the group consisting of SEQ ID NOS: 21-40.

6.   A method for detecting lung cancer comprising

20   providing a nucleic acid sample from an individual;

hybridizing the nucleic acid sample with probes that specifically hybridize with about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS:. 1-20;

detecting a presence of hybridization; and

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correlating the presence of hybridization with the presence or absence of lung

cancer.

7.   The method of claim 6, where in the probes are selected from the group consisting

5   of SEQ ID NOS: 21-40.

8.   The method of claim 6, wherein the hybridizing step is performed on a gene chip.

9.   A method for differentiating lung cancer types comprising

10   providing a nucleic acid sample from an individual;

     hybridizing the nucleic acid sample with probes that specifically hybridize with

about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20;

        detecting a presence of hybridization; and

     correlating the presence of hybridization with the type of lung cancer.

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10.   The method of claim 9, where in the probes are selected from the group consisting

of SEQ ID NOS: 21-40.

11.   The method of claim 9, wherein the hybridizing step is performed on a gene chip.

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12.   A method of monitoring the treatment of a patient with lung cancer comprising

        administering a pharmaceutical composition to the patient;

        obtaining a nucleic acid sample from the patient;

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contacting the tissue sample with probes which specifically hybridize with about

6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20; and

correlating the hybridization pattern with the effectiveness of the pharmaceutical

composition in treating lung cancer.

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13.   The method of claim 12, where in the probes are selected from the group

consisting of SEQ ID NOS: 21-40.

14.   The method of claim 12, wherein the hybridizing step is performed on a gene

10   chip.

15.   A method for screening for an agent capable of modulating the onset or

progression of lung cancer comprising

exposing a cell to the agent;

15   obtaining a nucleic acid sample from the cell;

contacting the nucleic acid sample with probes which specifically hybridize with

about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20;

and

correlating the hybridization pattern with the effectiveness of the agent in

20   modulating the onset or progression of lung cancer.

16.   The method of claim 15, where in the probes are selected from the group

consisting of SEQ ID NOS: 21-40.

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17.   The method of claim 15, wherein the hybridizing step is performed on a gene chip.

5   18.   A method for detecting lung cancer comprising

providing a sample from an individual;

contacting the sample with probes that specifically binds gene products of about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20;

detecting a binding pattern; and

10   correlating the binding pattern with the presence or absence of lung cancer.

19.   The method of claim 18, where in the probes are selected from the group consisting of SEQ ID NOS: 21-40.

15   .20.   The method of claim 18, wherein the contacting step is performed on a gene chip.

21.   The method of claim 18, wherein the gene products are selected from the group consisting of DNA, RNA, and proteins.

20   22.   A method for differentiating lung cancer types comprising

providing a sample from an individual;

contacting the sample with probes that specifically binds gene products of about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20;

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detecting a binding pattern; and

correlating the binding pattern with the type of lung cancer.

23. The method of claim 22, where in the probes are selected from the group
consisting of SEQ ID NOS: 21-40.

24. The method of claim 22, wherein the contacting step is performed on a gene chip.

25. The method of claim 22, wherein the gene products are selected from the group
consisting of DNA, RNA, and proteins.

26. A method of monitoring the treatment of a patient with lung cancer comprising
administering a pharmaceutical composition to the patient;
obtaining a sample from the patient;
contacting the tissue sample with probes that specifically bind gene products of
about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20;
detecting a binding pattern; and
correlating the binding pattern with the effectiveness of the pharmaceutical
composition in treating lung cancer.

27. The method of claim 26, where in the probes are selected from the group
consisting of SEQ ID NOS: 21-40.

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28.   The method of claim 26, wherein the contacting step is performed on a gene chip.

29.   The method of claim 26, wherein the gene products are selected from the group consisting of DNA, RNA, and proteins.

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30.   A method for screening for an agent capable of modulating the onset or progression of lung cancer comprising

exposing a cell to the agent;

obtaining a sample from the cell;

10   contacting the sample with probes that specifically bind gene products of about 6 to about 20 sequences selected from the group consisting of SEQ ID NOS: 1-20;

detecting a binding pattern; and

correlating the binding pattern with the effectiveness of the agent in modulating the onset or progression of lung cancer.

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31.   The method of claim 30, where in the probes are selected from the group consisting of SEQ ID NOS: 21-40.

32.   The method of claim 30, wherein the contacting step is performed on a gene chip.

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33   The method of claim 30, wherein the gene products are selected from the group consisting of DNA, RNA, and proteins.

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